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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/281,059 03/09/99 ASAO

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EXAMINER

MM92/1108

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PEREZ, G

ART UNIT

PAPER NUMBER

2834

DATE MAILED:

11/08/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/281,059

Applicant(s)

ASAO ET AL.

Examiner

Guillermo Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Continued Prosecution Application

The request filed on October 12, 2000 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/281,059 is acceptable and a CPA has been established. An action on the CPA follows.

Specification

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

(a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

(c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because the new limitations added to claim 1 and included in the communication filed on October 12, 2000 are not mentioned nor shown in the specifications or drawings.

Claim Rejections - 35 USC § 112

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new limitations added to claim 1 and included in the communication filed on October 12, 2000 are not mentioned nor shown in the specifications or drawings.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The new limitations added to the claims on the October 12, 2000 communication are not clear as to what length is being shortened in the radial direction. Is it the winding thickness, the cylindrical portion or the flanges? The "shortening a length thereof in the radial direction than that thereof in an axial direction of said cylindrical portion." line is not clearly describing what and how is being modified in the embodiment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 to 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art (APA) in view of Hiroshima et al. (U.S. Pat. No. 5, 174, 013) and further of Harris et al. (U.S. Pat. No. 5, 539, 265) in view of H. Meier (U. S. Pat. No. 3,320,788).

APA discloses a rotor (1) for an automobile alternator comprising: a pair of field cores (12a, 12b) each having a cylindrical base portion (121a, 121b) and a plurality of claw-shaped magnetic poles (122a, 122b) projecting from outer circumferential edges of said base portions (121a, 121b), said field cores (12a, 12b) are secured to a rotating shaft (11) facing each other wherein end surfaces of said base portions (121a, 121b)

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are in close contact with each other and said claw-shaped magnetic poles (122a, 122b) intermesh with each other; a cylindrical bobbin (16) having a cylindrical portion (16a) and a pair of first and second annular flange portions (16b) projecting perpendicularly from both ends of said cylindrical portion (16a), said bobbin (16) being fitted over said base portions (121a, 121b) of said pair of field cores (12a, 12b); and a field winding (15) wound a predetermined number of turns into multiple layers on said cylindrical portion of said bobbin of said rotor. However, APA does not disclose that said field winding has a flat shape in which a pair of opposite flat surfaces are parallel, said field winding being wound onto said cylindrical portion of said bobbin such that said pair of opposite flat surfaces face the inner circumferential side and the outer circumferential side, respectively, relative to the radial direction; nor a vibration-suppressing ring fitted on the inner circumference of said claw-shaped magnetic poles of said pair of field cores; nor a field winding mounting portion of said bobbin which said field is wound is constructed by shortening a length thereof in the radial direction that that thereof in an axial direction of said cylindrical portion.

Hiroshima et al. disclose that said field winding (4b) has a flat rectangular shape (figure 4 and column 7, lines 24 to 27) in which a pair of opposite flat surfaces are parallel (figure 7), said field winding being wound onto said cylindrical portion of said bobbin wherein said pair of opposite flat surfaces face the inner circumferential side and the outer circumferential side, respectively, relative to a radial direction, for the purpose of increasing winding density of the coil.

Harris et al. (U.S. Pat. No. 5, 539, 265) disclose a vibration-suppressing ring (33) fitted on the inner circumference of said claw-shaped magnetic poles (12 and 14) of said pair of field cores for the purpose of preventing vibration of the fingers of pole pieces as the rotor assembly rotates within the alternator assembly as a whole.

H. Meier discloses a field winding mounting portion of said bobbin which said field is wound is constructed by shortening a length thereof in the radial direction that that thereof in an axial direction of said cylindrical portion, for the purpose of improving space factor.

It would have been obvious at the time the invention was made to modify the rotor of APA and provide it with field winding having a flat shape, in which a pair of opposite flat surfaces are parallel, said field winding being wound onto said cylindrical portion of said bobbin such that said pair of opposite flat surfaces face the inner circumferential side and the outer circumferential side, respectively, relative to the radial direction, as disclosed by Hiroshima et al.; and with a vibration-suppressing ring fitted on the inner circumference of said claw-shaped magnetic poles of said pair of field cores as disclosed by Harris et al. (U.S. Pat. No. 5, 539, 265); and a field winding mounting portion of said bobbin which said field is wound is constructed by shortening a length thereof in the radial direction that that thereof in an axial direction of said cylindrical portion as disclosed by H. Meier, for the purpose of maximizing the winding density of the coil, to minimize motor vibrations during operation, and improving space factor.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Hiroshima et al. and further of Harris et al. in view of H. Meier as applied to claim 1 above, and further in view of Harris et al. (U.S. Pat. No. 5, 892, 313).

APA, Hiroshima et al., Harris et al. and H. Meier disclose a rotor as described on item 1 above. However, neither APA, Hiroshima et al., Harris et al. nor H. Meier disclose permanent magnets fitted between said claw-shaped magnetic poles of said pair of field cores.

Harris et al. (U. S. Pat. No. 5, 892, 313) disclose permanent magnets (34) fitted between said claw-shaped magnetic poles (12 and 14) of said pair of field cores for the purpose of increasing power output without increasing the physical size of the machine.

It would have been obvious at the time the invention was made to modify the rotor of APA, Hiroshima et al., Harris et al. and H. Meier and provide it with permanent magnets fitted between the claw-shaped magnetic poles of a pair of field cores as disclosed by Harris et al. (U. S. Pat. No. 5, 892, 313), for the purpose of increasing the power output of the machine without increasing the size of the machine.

Conclusion

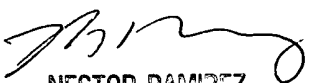
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
November 3, 2000


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2834